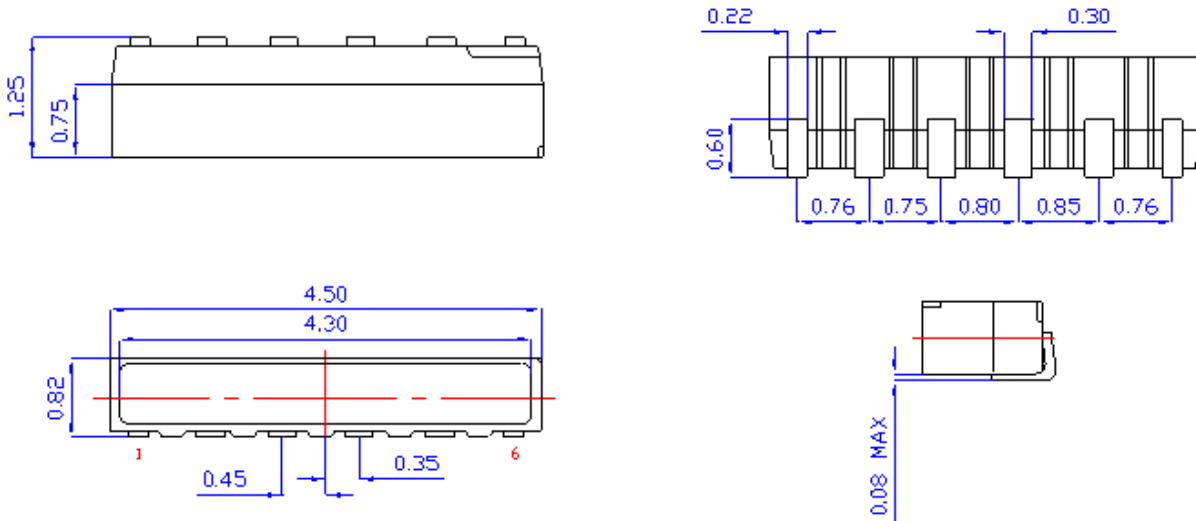


SPECIFICATION

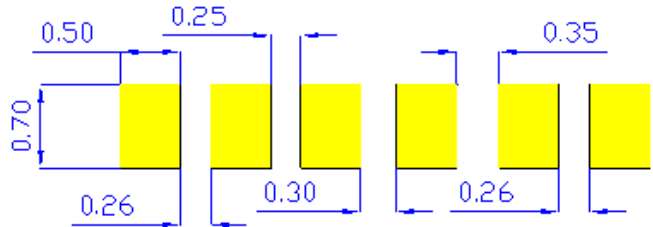
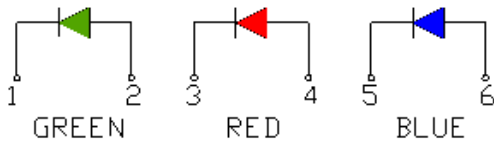
CSPRT185R2GT2B2C

PACKAGE OUTLINES



TYPICAL INTERNAL EQUIVALENT CIRCUIT

RECOMMENDED SOLDERING PATTERN



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CSPRT185R2GT2B2C	InGaAlP	Red	Water Clear	120°
	InGaN	Green	Water Clear	120°
	InGaN	Blue	Water Clear	120°



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ABSOLUTE MAXIMUM RATINGS
(TA=25°C)

Parameter	Symbol	Max Rating		Unit
		Blue/ Green	Red	
Forward Current	IF	30	50	mA
Reverse Voltage	VR	5	5	V
Power Dissipation	Pd	110	130	mW
Operating Temperature Range	TOP	-40~+85		°C
Storage Temperature Range	TSTG	-40~+90		°C
Peak Pulsing Current (tp ≤ 10 μs, duty cycle = 0.005)	IFP	100		mA

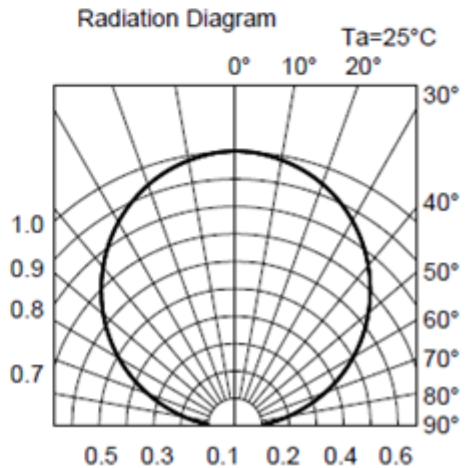
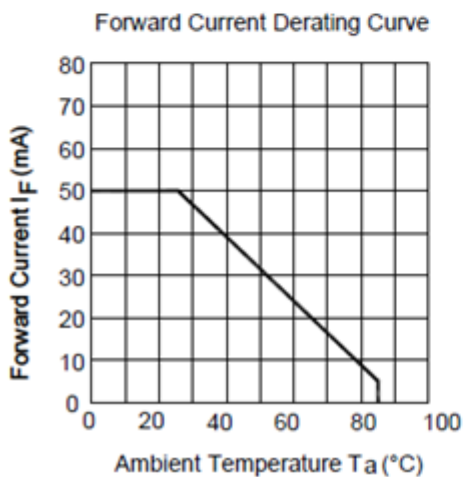
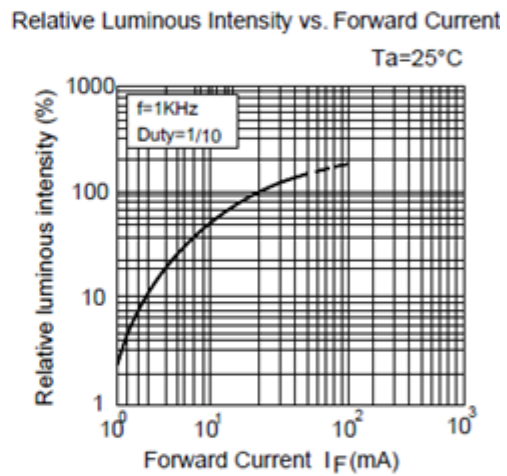
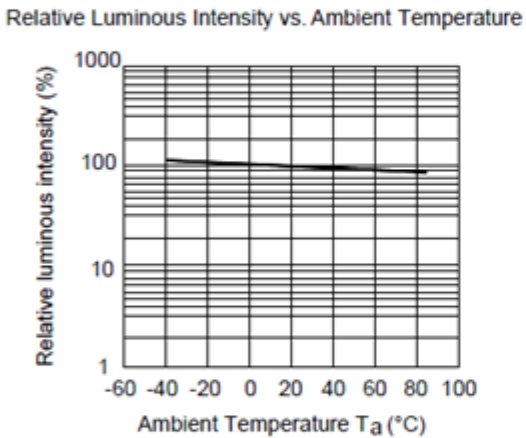
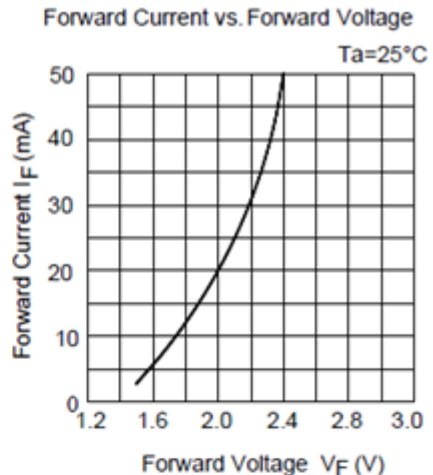
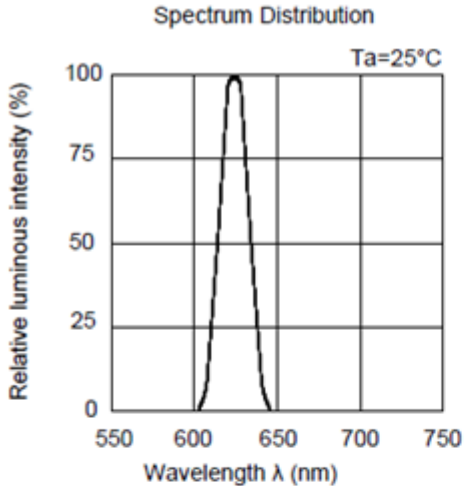
OPTICAL-ELECTRICAL CHARACTERISTICS
(TA=25°C)

Parameter	Symbol	Test Condition	Color	Value			Unit
				Min	Typ	Max	
Luminous Intensity	Iv	IF = 20mA	Red	225	400	-	mcd
			Green	565	1000	-	
			Blue	57	120	-	
Forward Voltage	VF	IF = 20mA	Red	-	2.0	2.3	V
			Green	-	3.0	3.5	
			Blue	-	3.0	3.5	
Viewing Angle at 50% Iv	2θ1/2	IF = 20mA	-	-	120	-	Deg
Dominant Wavelength	λD	IF = 20mA	Red	618	-	627	nm
			Green	525	-	535	
			Blue	457	-	465	

*Tolerance of viewing angle: -10 / +5 deg.

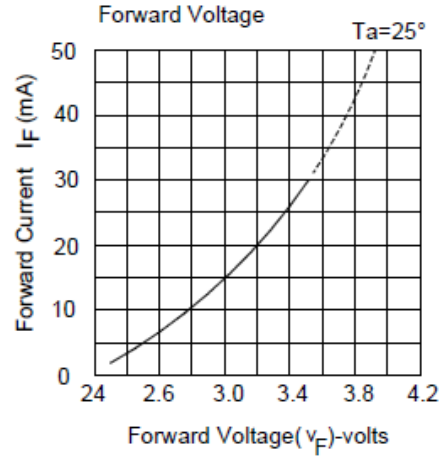
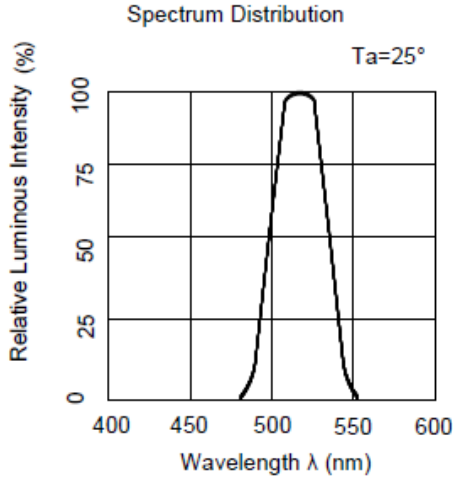

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TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES (RED)

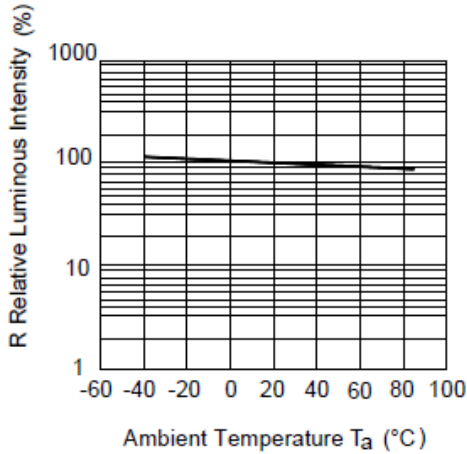


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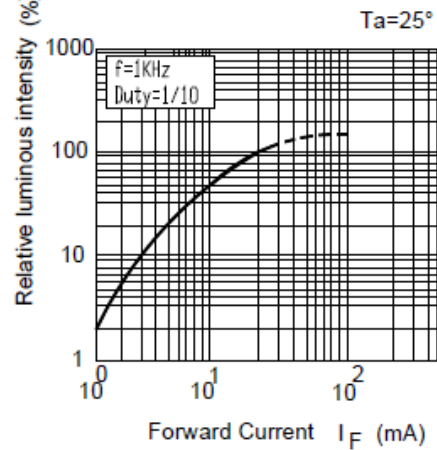
TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES (GREEN)



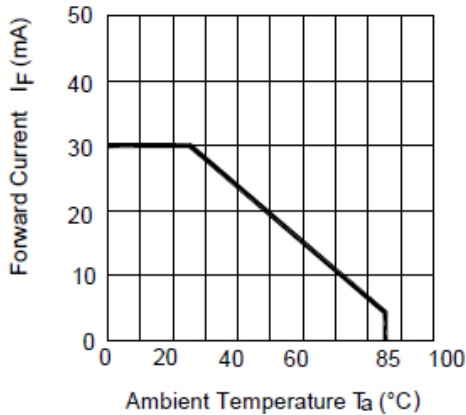
Relative Luminous Intensity vs. Ambient Temperature



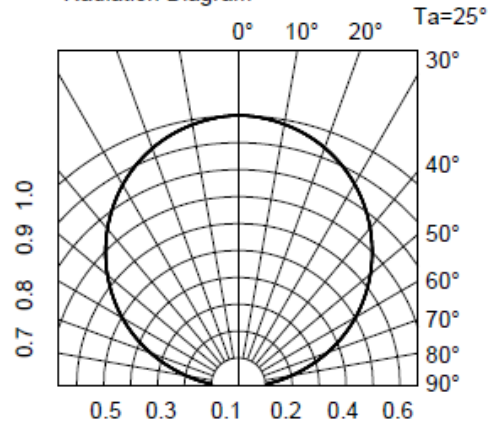
Relative Luminous Intensity vs Forward Current



Forward Current Derating Curve

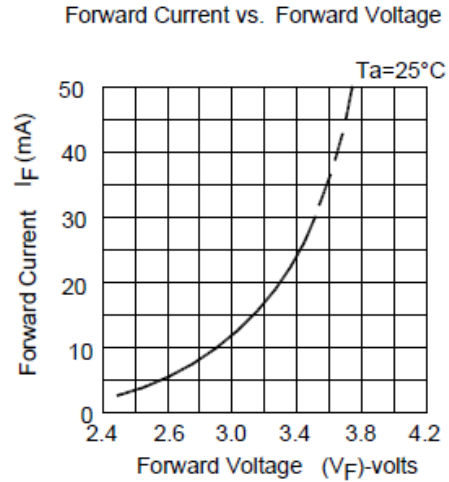
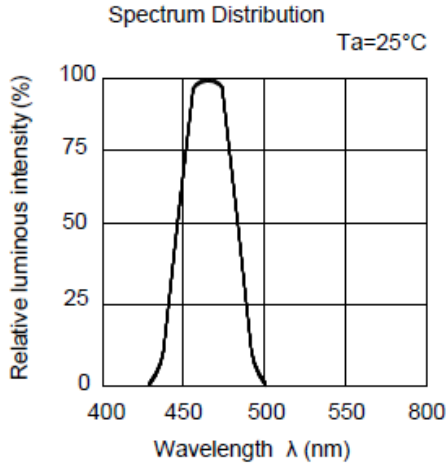


Radiation Diagram

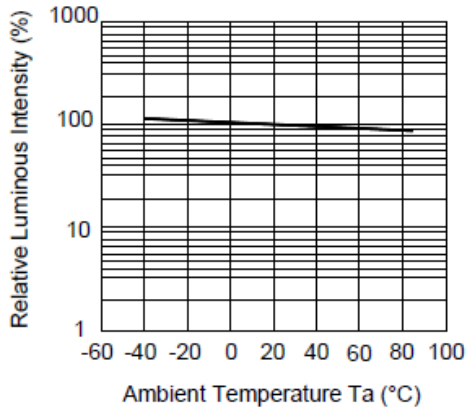


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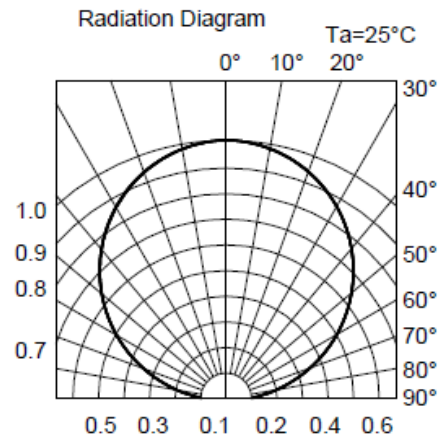
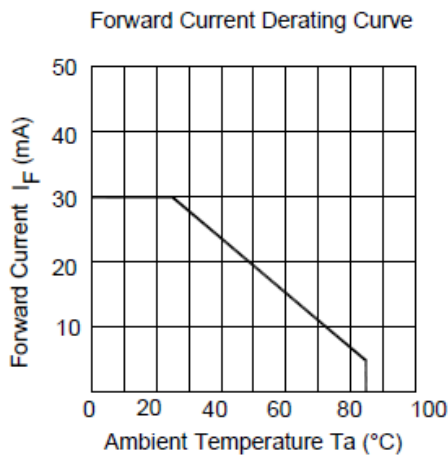
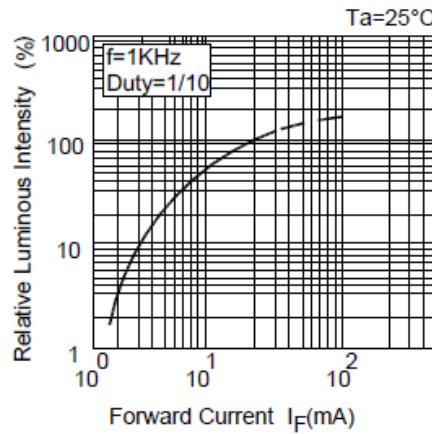
TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES (BLUE)



Relative Luminous Intensity vs. Ambient Temperature



Rel. Luminous Intensity vs Forward Current



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SOLDERING CONDITIONS

PRECAUTIONS FOR USE

1. Over-current –proof

Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (burn out will happen).

2. Storage

2.1. Do not open moisture proof bag before the products are ready to use.

2.2. Before opening the package: The LEDs should be kept at 30°C or less and 90%RH or less.

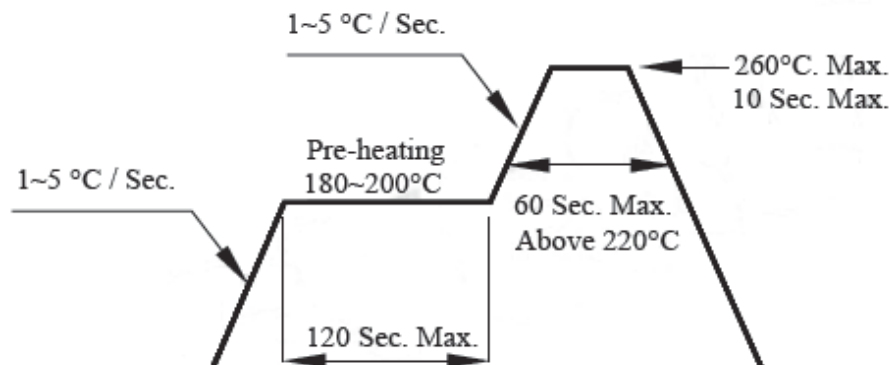
2.3. After opening the package: The LED's floor life is 168 hours under 30°C or less and 60% RH or less. If unused LEDs remain, it should be stored in moisture proof packages.

2.4. If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

Baking treatment: 60±5°C for 24 hours.

3. Soldering Condition

3.1. Pb-free solder temperature profile



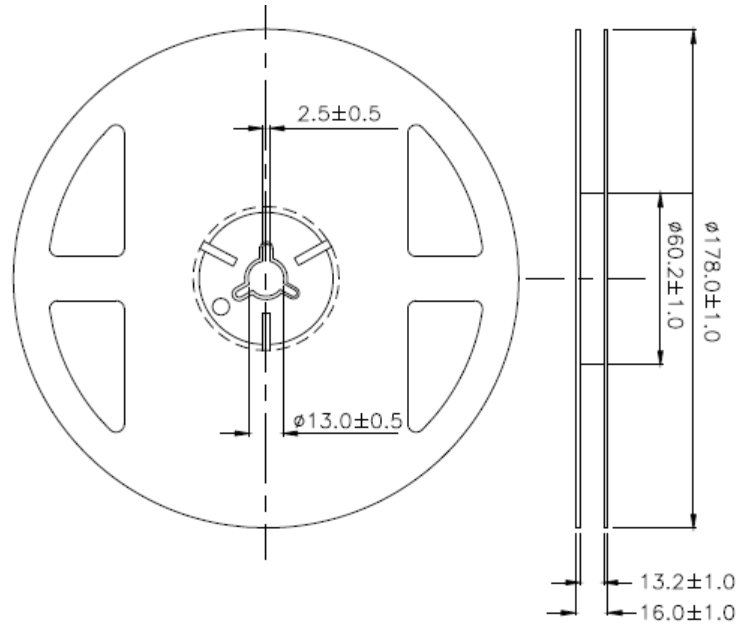
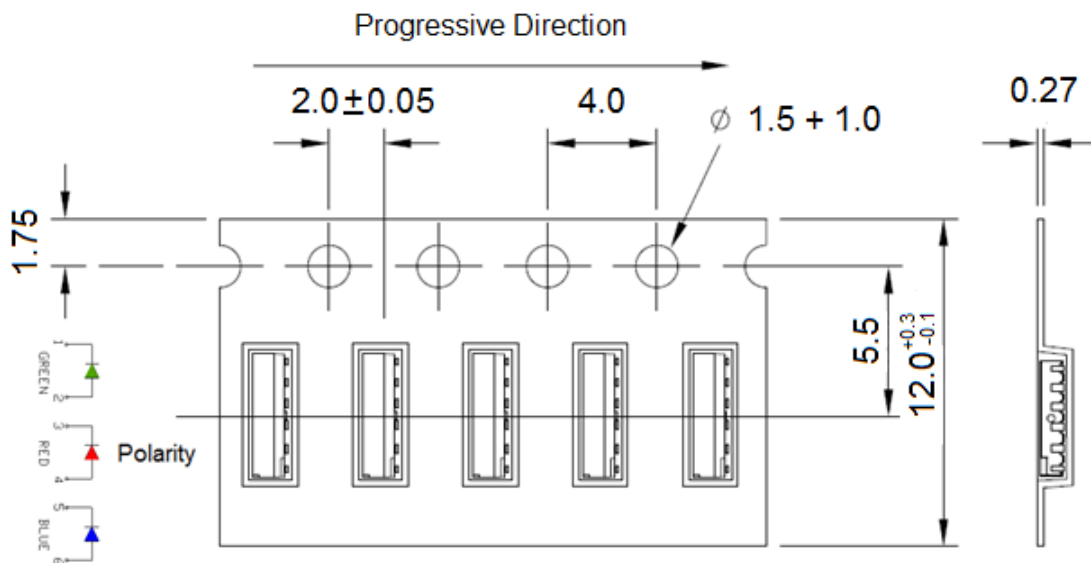
3.2. Reflow soldering should not be done more than two times.

3.3. When soldering, do not put stress on the LEDs during heating.

3.4 After soldering, do not warp the circuit board.



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REEL PACKAGING
REEL DIMENSIONS

CARRIER TAPE DIMENSIONS

Note:

1. The tolerances unless mentioned is $\pm 0.1\text{mm}$; Unit = mm
2. 2,000 PCS per reel



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